

REMARKS

This application has been amended in a manner that is believed to place it in condition for allowance at the time of the next Official Action.

Claims 27-34 are pending in the present application. Claims 19-26 have been canceled. Support for claims 27-34 may be found in the present specification at page 5, lines 22-29 and in the original claims.

In the outstanding Official Action, claims 19-26 were rejected under 35 USC §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

The outstanding Official Action rejected claims 19 and 20 as for allegedly being unclear. Claims 27-29 have been drafted in a manner so that they recite a phytosanitary method for the protection of plants against pathogens or predators, and for facilitating the adaptation of plants to raised ozone levels. Claims 30-34 are directed to a biofertilizing method for controlling abscission, controlling growth of a pistil or maturation of anthers, controlling the organization of cell walls during expansion of tissues and for reinforcing plant cell walls and adapting them to environmental stimuli. As a result,

applicants believe that the claimed methods are definite to one of ordinary skill in the art.

Claims 23 and 24 were drawn to compositions comprising a glycuronic oligosaccharide. The Official Action alleged that it was unclear how a composition comprising just one component could be a composition and not a compound. Claims 23 and 24 have been canceled. The subject matter of claims 23 and 24 is no longer recited in the claimed invention. Thus, it is believed that this contention has been obviated by the present amendment.

In view of the above, applicants believe that claims 27-34 are definite to one of ordinary skill in the art.

Claims 19-22 were rejected under 35 USC §102(b) as allegedly being anticipated by or, in the alternative, under 35 USC §103(a) as allegedly being obvious over ADACHI et al. 5,588,254. This rejection is respectfully traversed.

ADACHI et al. disclose a method for cultivating plants comprising the administration of a plant growth accelerating oligosaccharide. The oligosaccharide is obtained by decomposing a polysaccharide. The outstanding Official Action alleges that the document describes the use of gluronic and/or mannuronic oligmers of DP 2-20 as growth accelerators of plants. However, ADACHI et al. fail to disclose or suggest the 1,3  $\beta$ -D-glucanase, 1,4  $\beta$ -D-glucanase, and xyloglucan endotransglycolase amplifying activities of oligo 1,4  $\beta$ -D-mannuronans.

In fact, ADACHI et al. only generically teach that alginic oligosacharides may be applied to fruit to enhance growth. ADACHI et al. do not teach or suggest a phytosanitary method for the protection of plants against pathogens or predators, or for facilitating the adaptation of plants to raised ozone levels. Likewise, the publication does not disclose a biofertilizing method for controlling abscission, controlling growth of a pistil or maturation of anthers, controlling the organization of cell walls during expansion of tissues and for reinforcing plant cell walls and adapting them to environmental stimuli.

The growth accelerators taught by ADACHI et al. affect cell growth and are not related to oligo 1,4  $\beta$ -D-mannuronans of DP4 which have a xyloglucan endotransglycolase amplifying effect as set forth in the present disclosure (see Figure 1). Thus, applicants believe that ADACHI et al. fail to anticipate or render obvious the claimed invention.

Claims 23-26 were rejected under 35 USC §102(b) as allegedly being anticipated by or, in the alternative, under 35 USC §103(a) as allegedly being obvious over ADACHI et al. Applicants believe the present amendment obviates this rejection.

As noted above, claims 23-26 have been canceled. The subject matter of claims 23-26 is no longer recited in the

claimed invention. Thus, it is believed that the rejection has been obviated.

Claims 19-22 were rejected under 35 USC §102(b) as allegedly being anticipated by or, in the alternative, under 35 USC §103(a) as allegedly being obvious over ADACHI et al. (U.S. Patent 4,993,185). This rejection is traversed.

The ADACHI et al. patent is directed to a process for improving the organoleptic quality of fruit by applying alginic oligosaccharides, which are obtained by enzymatically decomposing or hydrolyzing alginic acid, to a fruit tree.

However, ADACHI et al. do not teach the relationship of 1,3  $\beta$ -D-glucanase, 1,4  $\beta$ -D-glucanase, xyloglucan endotransglycolase enzymes and 1,4  $\beta$ -D-mannuronans as set forth in the claimed invention. ADACHI et al. fail to even suggest that alginic oligosaccharides can be used in a phytosanitary method for the protection of plants against pathogens or predators, and for facilitating the adaptation of plants to raised ozone levels.

Moreover, there is no recognition that these oligosaccharides can be used in a biofertilizing method for controlling abscission, controlling growth of a pistil or maturation of anthers, controlling the organization of cell walls during expansion of tissues and for reinforcing plant cell walls and adapting them to environmental stimuli.

Thus, in view of the above, applicants believe that ADACHI et al. (U.S. Patent 4,993,185) fail to anticipate or render obvious the claimed invention.

Claims 23-26 were rejected under 35 USC §102(b) as allegedly being anticipated by or, in the alternative, under 35 USC §103(a) as allegedly being obvious over ADACHI et al. (U.S. Patent 4,993,185). Applicants believe that this rejection has been obviated by the present amendment.

Claims 23-26 have been canceled. The subject matter of claims 23-26 no longer appears in the claimed invention. As a result, applicants believe that the rejection has been obviated by the present amendment.

Claims 20 and 24 were rejected under 35 USC §102(b) as allegedly being anticipated by KAISHA (JP 4335839). This rejection is respectfully traversed.

The KAISHA publication describes the use of mannuronic oligomers in a method for obtaining artificial seeds from plant tissue or cells which have been placed in culture media containing the oligomers. However, the KAISHA publication fails to disclose or suggest applying to plants a 1,3  $\beta$ -D-glucanase amplifying effective amount of oligo 1,4  $\beta$ -D-mannuronans in a phytosanitary method or biofertilizing method.

Thus, in view of the above, applicants believe that the KAISHA publication fails to anticipate or render obvious the claimed invention.

Claims 23-26 were rejected under 35 USC §102(e) as allegedly being anticipated by NAKANISHI et al. 5,952,308. Applicants believe the present amendment obviates this rejection.

As noted above, claims 23-26 have been canceled. The subject matter of claims 23-26 is no longer recited in the claims. Thus, applicants believe that the rejection has been obviated.

In view of the present amendment and the foregoing remarks, therefore, it is believed that this application is now in condition for allowance, with claims 27-34, as presented. Allowance and passage to issue on that basis are accordingly respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any

overpayment to Deposit Account No. 25-0120 for any additional  
fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

*Philip Dubois*

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Philip Dubois, Reg. No. 50,696  
745 South 23<sup>rd</sup> Street  
Arlington, VA 22202  
Telephone (703) 521-2297  
Telefax (703) 685-0573  
(703) 979-4709

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